



Knowledge to Shape Your Future





# California Public Utilities Commission Smart Grid Rulemaking: Workshop 1 - Consumer Issues

<u>Session Two: 1:00 – 2:30 PM</u>

Interaction of consumer-owned devices, including distributed energy resources, with the Smart Grid



#### Following Advanced Meter Deployment



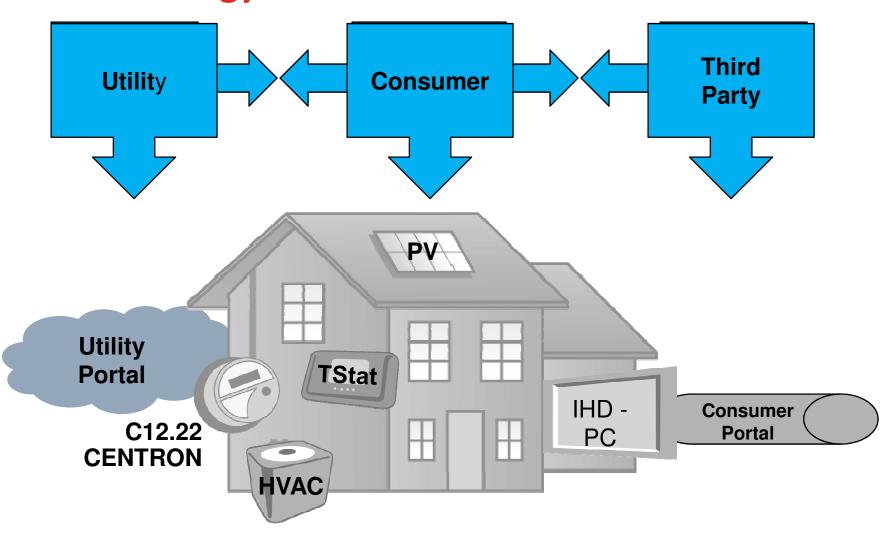
Solutions

### Like financial strategies there will be a large diversity in participation

- Consumers will participate differently We need to enable all levels of services
  - > Pension / 401K / Mutual Funds / Managed Funds / Etc.
  - > Passive -> Active -> Motivated Participants
- Differentiate between the utility and consumer portal
  - > Utility enables operational and basic services
  - > Consumer enables advanced services



#### **Shared Energy Information**





### 1. How might the CPUC facilitate the expansion of Consumer owned devices, including DER?

- Education & awareness on individual & societal benefits
- Encourage third party participants (direct & indirect)
- Support rates that reflect true energy costs
- Encourage proliferation of Zigbee Smart Energy Profile
- Utilize utility infrastructure to ensure initial market launch
- Allow commercial & technical innovation
- Encourage standards at the system and domain interfaces
- Support standards which drive "what" objectives need to be met rather than "how" they are achieved



## 2. Roles utilities might play in testing, subsidizing and/or supporting Consumer devices?

- Initially provide compatibility compliance
- Resolve initial Consumer device connectivity
- Potentially provide financing options
- Allow cost recovery for ensuring early adoption
  - > Reward for encouraging proliferation
- Utilities are not equipped for long term customer support



#### 3. Policies for installation & interconnection of distributed energy resources?

- Performance compliance to ensure system non-disruption
- Installation certification policies and procedures
- Define baseline performance expectations
  - > For third party participants
  - > For Consumers



# 4. Investments utilities and/or Consumers might make to measure and monitor performance of distributed energy resources?

- Sub-metering at the circuit and/or device level
  - > Advanced meters measure aggregated premise consumption
- Third party tools for consultation and management
- Utility back office systems for support services and dispatch
  - > Shared open access to approved Consumer energy data
  - > Assistance in managing protection of customer privacy
  - > Validated and normalized operational data